NON-WIRES SOLUTIONS ROUND TABLE
July 21-22, 2004
BPA Headquarters, Portland, Oregon
Meeting Notes

Papers and handouts from this meeting are posted on the BPA web site at:
http://www.transmission.bpa.gov/PlanProj/Non-Construction_Round_Table/

Facilitator Diane Adams welcomed the Non-Wires Solutions (NWS) Round Table members and asked for introductions. She then went over the two-day meeting agenda.

Agenda Item 1: Review of Overarching Goals

Brian Silverstein described the NWS Round Table's work as a way "to expand the tool kit" for BPA and the region, "so we have alternatives when we see problems on the transmission grid." The round table is looking at ways to reduce or eliminate barriers to alternatives to construction, he said. BPA has identified sufficient measures to defer the Olympic Peninsula reinforcement one year as a result of the pilot and has identified two projects as candidates for an NWS, Silverstein added.

What is the ultimate goal, deferral or replacement of a potential new transmission project? a round table member asked. I prefer to think in terms of deferral, Silverstein responded, but deferral could be for many years. Perhaps even more important than delaying capital expenditures, deferring large construction projects helps to address uncertainty about the future, he said. Silverstein noted, for example, questions about the future of some of the pulp mill operations on the Olympic Peninsula. Whether these mills operate has a big impact on the need for more transmission to the peninsula, he explained. As long as we can defer a construction project, we retain the ability to respond if circumstances change, Silverstein explained.

We should not limit ourselves to looking only at new lines as candidates for NWS, a round table member said. We are also expanding the range of solutions for congestion and reliability problems, he stated.

Agenda Item 2: Specific Goals for 2003-2004

Carolyn Whitney said the round table's mission is in transition. She listed the accomplishments for 2003-2004, including development of a portfolio of non-wires measures that could be used, identification of barriers to the measures and how to address them, and setting up pilots to test the measures. We hope to gain the support of the region for NWS, she said, adding that it is important to communicate well about reliability to let others know "we are striking the right balance."

She asked round table members to give some thought to the future of the group and to whether the subcommittees need to keep meeting and working on institutional barriers. We are at a point to reassess what we want to do, Whitney concluded.

In response to a question about the role of NWS in the transmission rate case, Silverstein said BPA expects to propose a 14-20 percent increase in transmission rates. He pointed out that transmission program levels are being considered in the Programs in Review (PIR) process. In the Customer Collaborative, we heard that BPA should do away with its transmission research and development (R&D) budget, Silverstein said. But "we didn't hear that in the PIR," he added.

We have "a game plan" to reduce transmission staffing over the next 10 years, and overall, there are pressures on BPA's costs and staffing levels, Silverstein continued. To the extent you're concerned about these issues, there is an opportunity to submit comments in the PIR process, he said.

A round table member pointed out that staff cuts reduce the Transmission Business Line's (TBL's) ability to complete studies and analyze proposals for transmission service. Silverstein confirmed TBL has 20 to 25 proposed interconnects and requests for new transmission service in some stage of study.

The proposed 2005 to 2006 annual budget for NWS pilots is $500,000 from transmission and $500,000 from energy efficiency, he reported. In addition, there will be an opportunity for NWS "to compete" with other transmission-related R&D projects for up to an additional $500,000 a year, according to Silverstein. "We are plowing new territory" by proposing to put non-wires costs into transmission rates, and we need to convince people about that, he said. Silverstein said capitalizing NWS costs is a big issue at BPA, noting the agency follows Financial Accounting Standards Board (FASB) rules. If we can't get NWS into rates, we may have to add "rate treatment" as an institutional barrier, he said.

A round table member expressed frustration that budgeting starts with setting a dollar cap instead of with, "here's what we need to learn, how much will it cost?" Unfortunately, our budgets are not limitless, Silverstein responded. We cut the TBL budget by $40 million this year and have not been able to set aside as much as we originally proposed for NWS, he acknowledged.

A round table member suggested BPA look into using the savings accrued from deploying an NWS to fund more projects. That's a great idea, and we'll pursue it, Silverstein responded.

A round table member asked about accountability for the estimated savings achieved from conservation measures. How does BPA or a utility know it is actually receiving the energy savings it pays for with an energy efficiency project? Can the savings be counted on? he asked. The question spurred a discussion about how conservation program savings are or are not confirmed in the region.

One round table member explained that utilities receive a Conservation and Renewables Discount (C&RD) on their BPA power bill if they run qualifying programs. "But we've never had to show metered savings," he acknowledged. We've gotten too far away from

the rigorous verification of conservation savings, another member stated. We need to look much more closely and get back to independent verification, he added.

A BPA staffer said the agency is intent on continuing its conservation efforts. BPA's Regional Dialogue proposal aims for a program that is larger than what the agency currently offers, but how to fund it is an open question, he said. The Olympic Peninsula study is one of the first places where we will be able to figure out what we get out of a non-wires effort, he said. A round table member remarked on "the growing synergy between marrying non-wires with energy efficiency."

The Olympic Peninsula in Washington and the Lower Valley in Wyoming are candidates for deferring transmission through an NWS, Silverstein said. On the Olympic Peninsula, consultants are on the ground doing work for us, and in 2005, BPA will launch an environmental study that for the first time will include as much information on non-wires as wires solutions at the start of the EIS, he said. "We need a fix on the peninsula by 2008," so there is time to look at alternatives, according to Silverstein.

Several round table members commented on the prospects for a proposed wind development project on Vancouver Island, and it's potential to ease constraints on the Olympic Peninsula. We are meeting with the developers Silverstein said.

Will you propose an NWS on the Olympic Peninsula at the beginning of the NEPA process? a round table member asked. After our experience with Kangley-Echo Lake, I will never again go out with a preferred alternative at scoping, Silverstein responded. We will likely provide a list of possible actions in our proposal, including NWS, and then open it up to public comment, he explained.

Conservation Verification: John Pyrch confirmed that there are no formal requirements for verifying conservation savings in the C&RD program. For BPA's Conservation Augmentation program, "we have rigorous verification," he said. A round table member asked if auditors make site visits, and Pyrch said he was not certain that they did. Verification is a major issue for future program discussions, especially since we are in an acquisition mode with conservation, Pyrch said.

I don't think there is any on-site verification after the fact, a round table member said. He cited two sources of problems with confirming conservation savings: faulty baseline assumptions at the outset and assuring that measures remain in place. We need independent verification, and we need a voice in support of it, he stated, adding that verification should be part of the energy efficiency budget.

I don't think it's entirely a BPA issue, another member said. It's also the responsibility of utility conservation managers, he said. It seems there are two questions here, a round table member pointed out: first, did people go through with the measure and is it still working? And second, did the technique save what we thought it would?

Another round table member said the Energy Trust of Oregon has a budget for verification and Trust contractors do evaluations. It is a good idea to do after-the-fact verification, but it should be with broad goals in mind, another round table member said. When BPA was doing extensive oversight with its conservation programs – "seeing that utilities dotted every i and crossed every t" – it was not money well spent, she indicated.

We need to do enough monitoring and evaluation to assure we can rely on energy efficiency measures as an NWS and give people confidence to do them, a round table member commented.

Agenda Item 3: Goals for 2005-2006

Silverstein went over a draft of BPA's NWS targets for FY 2005. One of the targets is to apply NWS screening criteria on capital transmission projects of $2 million or more. There was a suggestion that BPA look at aggregating smaller projects to meet the $2 million threshold. One member suggested that the overall target ought to be: to implement an NWS. This should be the primary goal, with a number of objectives to support achieving it, he said.

Another round table member suggested the targets include forging a link between BPA's NWS efforts and other regional transmission developments. We need "to knit in" other regional players and activities, he said. Another member suggested the bylaws taking shape for Grid West incorporate ways to carry out NWS.

Once screening is done, is it your commitment to carry through on a project? one member asked. We should state in our targets, "what happens next," Silverstein responded.

With regard to NWS implementation, Silverstein reported on a meeting that sought feedback from customers, utilities and others on the Olympic Peninsula pilots. It was a very positive meeting, and "my general read" is that the customers are supportive, Silverstein said. This communication was important also to keep the utilities on board, Whitney added. We are hoping these customers and utilities "will sing the praises" of the NWS effort, she said. A round table member suggested BPA also target some outreach to local governments and tribes on the Olympic Peninsula.

Agenda Item 4: Institutional Barriers

Whitney introduced the list of institutional barriers and asked subcommittee leads for updates on their progress.

Reliability: Tom Foley reported on reliability. Our subcommittee separated the non-wires alternatives into four categories for study, each category with a distinct set of characteristics, he explained. The categories are: energy efficiency measures; distributed generation, including single-cycle combustion turbines; contractual demand response; and voluntary demand response.

For energy efficiency, we have contracts out with consultants who are studying how much conservation is left, Foley said. A company called Celerity is addressing distributed generation with a pilot project on the Olympic Peninsula that involves aggregating and dispatching distributed generation resources at various sites, he explained. With regard to demand response, BPA staff has done a pilot on the Olympic Peninsula and determined there is some interest on the part of utilities and customers, including Mason PUD, Foley said.

I also did research to see if other work has been done on the topic of NWS and reliability, he continued. I found that this round table's work is on the leading edge, and others are looking to see what we are doing, Foley reported. This subcommittee should continue to work on reliability issues, he wrapped up.

Round table members suggested looking into storage possibilities for the Olympic Peninsula and testing variations in the notice provided to demand response customers. David Le said a contractor's study of demand response will include variations in the notice period. We're looking at "what ifs" – if, for example, you do not have 24 hours available, is there value if you provide less? Le explained.

One round table member questioned whether voluntary demand response would work. Your dispatcher has to be able to cut off the load, he said. We may get less participation if the system isn't voluntary, but we are testing that hypothesis, Silverstein replied.

Another round table member suggested plans be made to run demand-response tests in the winter and learn from the experience. Even an informal way of gathering some data, such as through phone calls to customers, could have value, he said.

Price Signals: Tom Karier began his update on the pricing subcommittee's work by reporting that Northwest Power and Conservation Council staff are nearing final model runs for the resource portfolio in the fifth power plan. They keep coming up with conservation as the least-cost, least-risk resource, he said. Demand response also shows up in the models as something we need to develop, and estimates of the availability indicate it is also a least-cost, least-risk resource, Karier said.

The pricing subcommittee concluded that we need more experience with pricing mechanisms to see if they are effective to encourage or discourage certain types of use, he reported. Karier said more information is needed to determine whether current mechanisms, including the unauthorized increase charge, FERC's "or" test, and the short-distance discount, are working. We need more experience with prices, he reiterated, adding that a market for unused transmission capacity is developing among customers, and BPA could encourage the market with price signals. More information would help to determine whether new mechanisms are needed, Karier added.

The pricing subcommittee discussed other topics, including the misalignment of incentives in forecasting and the inherent bias toward overforecasting, he continued. In

addition, we support the demand response buyback pilots and BPA's efforts to develop seasonal products, Karier concluded.

The interstate gas pipelines could offer a lot of lessons on pricing options, another round table member offered. The pricing mechanisms on the pipelines work well in terms of determining where resources are allocated, another member said. "If there isn't a customer, a pipeline project doesn't get built," he pointed out.

A lot of utilities "are getting very clever" about selling their unused transmission capacity, Silverstein said. We are making much less money from our own sales of excess capacity as a result, he said. It's hard for us to tell what is going on with these transactions since there isn't a public bulletin board, but there is anecdotal evidence that the market has become active, Silverstein added. It's not in BPA's interest to encourage this, but there may be a way to work something out, a round table member said.

Round table members discussed appropriate price signals and the fact that a customer's transmission forecast does not have to match the level of service the customer subscribes to with BPA. When a customer gives you a forecast – on which you base your construction decisions – it doesn't have to relate to the customer's own purchase of transmission service, a round table member pointed out.

This issue has come up repeatedly, another member stated. Why not propose something in the transmission rate case to solve it? he asked. We've discussed the issues we want to tackle in the rate case, and price signals didn't rise to the top of the list, Silverstein responded. But we're talking about providing better cost incentives for customers, the round table member responded. BPA "is socializing" the costs of these decisions to the entire system, he pointed out.

BPA does the forecasting for network customers, so it seems the disconnect is more of a problem with point-to-point service, a round table member said. He also noted that some BPA public customers are served by IOUs under General Transmission Agreements (GTAs). If you change the rules for transmission service, "there will be winners and losers" in the short term, he added.

It seems like there is a good pilot in here for testing price signals, a round table member said. Maybe there is an opportunity to do a pilot with towns on the Olympic Peninsula, she suggested.

The purpose of our subcommittee report is to make sure these issues don't fall through the cracks, Karier said. We have made suggestions, most of which will take a response from BPA, he said. Until BPA responds, there is not much more for the subcommittee to do, Karier concluded.

Load Forecasting: Ken Corum presented the work of the load forecasting subcommittee. There is concern that transmission customers have poor incentives to make an accurate forecast and that there may be a bias toward overforecasting, which results in

overinvestment in transmission, he said. Corum explained the difficulties in comparing forecasts and determining if they match reality. Forecasts are developed to serve different purposes, so it's questionable whether they can be simply compared, and parties are nervous about sharing data, he said. A variety of problems were identified at a June 2004 load-forecasting workshop, from varying definitions of "extreme event" to inadequate regional coordination, Corum reported.

In the end, we still don't know how to evaluate transmission forecasts and detect any bias, he summed up. Forecasters are aware of these issues, so we may see progress, Corum said.

Silverstein noted that forecasters from various entities rarely confer or work together. Data confidentiality is a big barrier to coordination, and the Northwest Power Pool is under a strict agreement not to release information, he said. Silverstein said there has been discussion about standardizing forecasts. A round table member pointed out that load forecasters generally deal with averages, not peaks, and the NWS are focused on peak demand.

Corum said follow-on work is planned on forecasting.

Who Benefits, Who Pays: Bill Pascoe reported on subcommittee work on four tasks related to who benefits from NWS projects and who pays. With regard to task 1, we have written a discussion paper that describes current programs and funding sources for NWS, he said. Both round table members and BPA have responsibility for tasks 2 and 3, spreading the word about the benefits of NWS and creating broader awareness of NWS in transmission planning processes, Pascoe reported. We pushed to BPA the task of creating real-world examples of NWS in partnership with generators and distribution utilities, he said. BPA has primary responsibility for this, he added. The subcommittee has done about as much as it can on these issues, Pascoe concluded.

This is an issue we really need to address to be successful, a round table member stated. It's very important on the Olympic Peninsula, he said. The Washington Utilities and Transportation Commission (WUTC) recognizes this issue, and we need help to keep the commission focused on it, Silverstein responded. There is some more that BPA can do, but we need to push for the follow-through into rates, he said. As an example, with compact fluorescent lights, no attempt has been made to parse out the benefits for the transmission and distribution (T&D) system, Silverstein said.

The investor-owned utilities need to go to their utility commissions to see what they can do, a round table member suggested. If Puget wants to do something with CFLs on the Olympic Peninsula and BPA says it will chip in because of the transmission benefit, it would be hard for the commission to turn them down, he said.

The round table members discussed how to target benefits and costs of NWS to T&D. We can report on some of these activities, including the report on NWS on the Olympic Peninsula, at the September NWS symposium, Silverstein said. With regard to

implementing NWS in partnership with utilities, we will have that opportunity with the request for proposals we put out, he added.

Would other utilities on the Olympic Peninsula be interested in this? a round table member asked. Silverstein said there might be an opportunity to get people together in the fall to discuss it. Before you approach other utilities, you need to show a benefit, another round table member responded. If they see a benefit, it won't be a problem to get them to participate, he said.

Transparency: Hardev Juj reported on work that has been done to address the issues of coordination and transparency in transmission planning. He detailed the types of data needed to develop a base case for NWS planning studies and reported on efforts to obtain the data. At the Western Electricity Coordinating Council annual meeting, we learned that data on stability is incomplete, Juj noted. The Northwest Transmission Assessment Committee (NTAC) has been asked to provide data on loads at various voltages, as well as seasonality ratings. Once we have the data we need, we will seek to do planning studies, he said.

No one on NTAC has rejected NWS, and they seem open to it, Juj said. Is the support active or passive? a round table member asked. Right now, it is passive, but once we start coming up with proposals, it could become active, another member answered.

Task 2 for coordination and transparency calls for BPA to develop a long-range transmission plan, and Silverstein acknowledged the agency is running behind on the task and will need a couple of additional months. Our next major step is to get specifics into the plan, he said.

Juj said the subcommittee would continue to work on coordination and transparency issues and provide another update in October.

Agenda Item 5: 2004 Pilots

Silverstein said the purpose of the pilot projects is to test issues and demonstrate successes that will lead to greater confidence that "these measures will deliver the goods."

Aggregated Distributed Generation: Dennis Quinn, president of Celerity, described his company and its work with aggregating distributed generation. Celerity is working on a pilot project to aggregate distributed generation facilities on the Olympic Peninsula, he explained. So far, 12 sites have been identified, and we are trying to get 5 MW of aggregated generation, Quinn indicated.

The "value proposition" for generation owners is that Celerity will upgrade their facilities or help them defer costs for an impending upgrade, as well as pay for maintenance and limited fueling, he said. Quinn outlined a number of upgrades that involve installing switching equipment, communications hardware and increasing the fuel storage.

In exchange for letting us use their resource for up to 100 hours a year, we will take over the upgrade and the O&M costs to keep the unit reliable, he said. We want the ability to turn the unit on or off, so we put in a commercial control that allows us to do that, Quinn said. We also want to provide fuel, and several generation owners have been receptive to biofuel, he said. Permitting is another area that we handle for the owners, Quinn said.

We've offered a non-binding approach to entering an agreement, and we'll go back to each and see if the costs make sense, he explained. So far two of the 12 have our proposal, Quinn continued. There is a real sense of people "wanting to do something for the peninsula," and that helps, he indicated. The customer gets a maintenance contract, and the interconnection arrangement on the grid is between Celerity and the grid, Quinn explained. Celerity contracts with the grid on a time and materials basis, he added.

How much do most of these generators run now? a round table member asked. From zero to 10-15 hours a year, Quinn answered. The maximum is about 30 hours, he added.

Some of us do not want to see economic dispatch of diesel generation, a round table member said. If it became routine to operate 100 hours annually, we would have concerns, he stated.

What about the generation owners' own emergencies? a round table member asked. They always have first rights – the equipment reverts to them for any emergency, Quinn said. He added that permits set aside the owners' emergency usage in calculating the 100 hours of annual operation that is allowed.

On the permits, have you looked at local mitigation? a round table member asked. We can add a filter, Quinn said. Noise is an issue, so we've screened out sites where the noise would be a problem, he added.

Richland Load Control and Micro-turbine: Mike Hoffman reported on pilot projects at PNNL facilities in Richland, Wash. The pilots are internet-based load control projects, one involving load reduction and the other controlling a micro-turbine at the site, he explained. Load in the commercial buildings at PNNL will be reduced for one-hour periods to find the maximum possible reduction in a super-peak period, and the micro-turbine will be used for peak reduction at the facilities, Hoffman said. Both pilots are controlled from BPA via the Internet, he said.

Hoffman described the extensive facilities and equipment at PNNL that will be part of the load-shedding pilot. One of the biggest challenges in setting up the pilots has been "getting through other people's computer firewalls," he said. We are up and running, but have not started testing yet, Hoffman said.

The computer link allows BPA to see the real-time temperatures at PNNL facilities, he continued, as he demonstrated the linkup in real time for the round table members. A round table member asked how the pilot would have been set up if the micro-turbine,

which PNNL already owned, were not part of the picture. We would probably have gone with direct load control instead of using the micro-turbine, Hoffman replied.

Idaho Biogas: Tom Osborn reported that a study is under way in Idaho on the feasibility of generation using biowaste from dairy herds. Mountain View Power is conducting the study under a $48,000 contract with the Idaho Department of Commerce, he said. The study is specific to the Twin Falls area, where there are numerous large dairies of 1,000 animals or more, Osborn explained.

He listed several objectives for the study, including: looking at dairy waste to energy technology, appropriate application, site selection, environmental permitting, costs and benefits of such a facility, and potential benefits to the electricity T&D system. Osborn also went over reasons for considering a digester, including the need to get rid of the waste from dairy herds for social and environmental reasons and the potential for power production. Waste from 1,000 cows could potentially produce 300 kW of electricity, he said. We don't know much about the costs yet, but there are a lot of challenges to making this work, Osborn acknowledged.

He outlined other aspects of the study, including site selection and how the technology actually works, and he presented pictures of existing digester facilities. Osborn noted the possibility of supplementing the biomass fuel with natural gas to increase the amount of generation available.

We expect to have a final report by the end of August, and we will send it around for comments, he said. A round table member asked about the permitting and local acceptance of such a project. If it is presented as a way to reduce odor, it will appeal to local residents, Osborn said. The noise could be mitigated, he added.

Demand Reduction: Brad Miller presented initial results from the demand reduction pilot on the Olympic Peninsula. A table of Bid vs. Delivered megawatts (MW) shows "encouraging" results, he said, noting that bidders tended to deliver more MW than they bid. "We've got potential here," Miller stated. He pointed out that even if customers reduced peak demand during the pilot by more than they bid, BPA paid only on the bid.

For the voluntary demand reduction offers made in March, we averaged 21.7 MW for each hour of reduction, Miller reported. The bid amounts represent between 1 percent and 4.7 percent of the peak demand load on the Olympic Peninsula, and the delivered amounts represent between 1 percent and 6 percent of the peak demand, he said. The total demand reduction payment/credit was $40,350, which Miller noted is "pretty cheap." What this says is "they are willing to work with us," he stated.

A pilot evaluation contract is in place, and a report is due by the end of August, Miller continued. We plan to run the pilot again this winter with the intent of hitting winter peak time periods, and we are going to look for additional demand-reduction possibilities, he said. A mandatory call is also under consideration, Miller said. In the initial pilot, calls to participants were made a day ahead of when the reduction was needed, he said.

FY05-06 Pilots: Le described the solicitation that went out for FY 2005-2006 NWS pilot projects. A Request for Offers (RFO) was issued June 10 to about 135 companies "we thought were likely candidates," he said, and proposals are due August 19. The solicitation was sent to companies that provide advanced metering, energy management services, building automation, and grid monitors and controls, Le said. In addition to the mailing, the RFO was advertised widely, he explained.

The next step is to form a team to evaluate proposals that come in and set up the criteria and evaluation process, Le continued. We would expect to have the evaluations complete by mid September, he said. Le said there would be a backup plan if the RFO fails to net viable projects, and he asked round table members to suggest pilot ideas.

A round table member suggested BPA go to distribution companies and find out if they are willing to participate in a pilot. It would be an opportunity for them to leverage their conservation dollars with dollars available for an NWS pilot project, he said.

Le went over the amount of funding available for future pilots: $1 million each in FY05 and FY06. He said the FY05 operational costs for the FY04 pilots is estimated at between $200,000 and $300,000, which leaves a $700,000 balance for new FY05 pilots. The potential to compete for an additional $500,000 in TBL funding for the pilots is also available, Le pointed out.

Round table members asked several questions about the RFO, including whether the projects are targeted at constrained transmission areas and whether cost sharing is a requirement. Le said the RFO is not looking for a specific problem fix. Cost-sharing is required, but the amount is not specified, he said. We'll weight various features of the proposals, and cost-sharing will be a factor in the weighting, Le stated.

He noted that four round table members have signed up to assist with proposal evaluations. One of the evaluation volunteers told the round table he did not think the round table members should be involved in selecting proposals. That could create problems, he said.

I've gotten about 10 calls and 20 e-mails about the RFO, Le reported. I think we need to go to aggregators, not to vendors, to get an adequate response, a round table member said. But we'll learn something if we don't get good responses, he added.

BPA-Ashland Demand Curtailment: Mike Hoffman described the two-way load control pilot that is taking place in Ashland. This pilot is to demonstrate direct load control (DLC) technical feasibility and to test the demand charge savings, as well as the potential contribution to transmission line deferrals, he said.

Ashland has load-control pilots for both commercial and residential customers, Hoffman said. The commercial pilot requires the cooperation of a number of parties, including

BPA, the city of Ashland, building operators and EnFlex, the load-control equipment provider, he explained.

Dick Wanderscheid said Ashland pays a lot in demand charges to BPA, up to 19 percent of its total bill in some months. He also noted that demand reduction could take on even greater importance if the federal system is allocated among customers in the future.

Wanderscheid acknowledged that it has been harder to recruit customers to the load control pilots than anticipated. We hope to get packages into new construction, he said, noting that the cost of installing the web-based load-control equipment in new construction is more cost-effective than replacing existing equipment and thermostats.

The EnFlex equipment is a link shared by the customer and BPA, Hoffman explained. It allows for remote curtailment of selected electrical loads; it can reset temperature setpoints, monitor the status of air conditioning units, and monitor energy usage and demand, he said. Hoffman presented a diagram of the system in the Ashland Library, and he noted that industrial customers are getting interested in the technology.

The residential demand-management program is called "GoodWatts" and the equipment provider is Invensys Solution, he continued. The meters and metering systems installed in homes give very accurate information about electricity demand in the home, Hoffman explained. He provided a real-time example of a homeowner's thermostat in Ashland, pointing out the temperature in the home and at what level the air conditioning system is set. The current cost to install the thermostat is $1,500, Hoffman said.

Does the customer have control? a round table member asked. Yes, the customer can override any remote changes, Hoffman replied.

In addition to load management, the thermostats and meters allow for remote meter reading, Wanderscheid pointed out. Ashland has 35 customers signed up for the program, which offers a $100 credit on a customer's annual electricity bill, he said. New construction again offers the best opportunity – we could do this without any cost to the utility, Wanderscheid pointed out.

In terms of the pilot, "we want to be able to actually do something," like turn off the water heat and see the effect on demand, he indicated. We also want to see how often people override the control, Wanderscheid said, adding that it might be possible to have an incentive or disincentive for a customer to do that.

I'm surprised at the lack of response, a round table member commented. But I don't see how this could ever pay for itself other than with new construction, she said. It could be more interesting in a tiered rate environment, she added.

We think that eventually we could do this for $200 a house, Wanderscheid answered, saying he believed it would "pencil out" for Ashland at that price.

There is a privacy issue here, another round table member said. It seems you could mask the information by assigning a customer number, rather than using a name or other personal information, he suggested.

Agenda Item 6: Transmission Adequacy

Silverstein briefed the round table on work that is being done to address transmission adequacy standards and BPA's efforts to engage the public in the discussion. The overarching question is how we determine that the power system in its entirety is adequate to meet load, he said. Among the issues for transmission, according to Silverstein, is the distinction between physical versus economic adequacy: can we keep the lights on versus how do we decrease price and volatility. Another issue for BPA is defining its role as a transmission provider, he said: for example, is our role just to serve our transmission customer contract or forecasted needs? And how do we divide up the costs? Silverstein said BPA is preparing an issue paper on transmission adequacy, and the September symposium offers an opportunity to explore the topic.

System adequacy requires comprehensive planning between generation and transmission, a round table member commented. They have to be linked together, he said. There should be an incentive for all utilities to work on this, he added. Are other utilities getting on board? he asked.

We need to figure out how to do integrated planning in an unintegrated world, Silverstein responded. He acknowledged the institutional and regulatory constraints that utilities face with integrated planning, and he said while people see BPA as in a position to plan for an integrated system, BPA is not necessarily the one acquiring resources. There was further discussion about the need for integrated planning across fuels and the potential for taking pressure off the grid if electric load is converted to gas.

Will your issue paper address the GTAs? a round table member asked. It wasn't on our screen, but we will add it, Silverstein said.

Integration of the power/transmission function is key, a round table member said. When BPA is pressed on the power side, "it leans on the river," she said. Can you do things that ease the situation so you do not fall back on the river? That's an important question for my constituency, she stated.

Agenda Item 7: Other Institutional Issues

Tom Foley presented a list of "low priority" institutional issues, asking if round table members feel they should be put back on the active list. The round table discussed the first item on the list, interconnection standards, and three round table members agreed to brainstorm the issue further and report back as to whether it should be treated separate from other issues related to distributed generation.

The round table determined that no other items on the list should be moved to more active consideration. A potential new issue emerged from the discussion: the interaction between T&D infrastructure and growth and development.

Agenda Item 8: Questions Emerging from Day 1

Adams introduced four issues identified by the round table the previous day that warrant further discussion:

- How can we capitalize and functionalize non-wires costs?
- How can we better determine who benefits and who pays for non-wires solutions?
- What should an outreach strategy include, who should it target and how can we implement the strategy?

With regard to the first question, Silverstein said he was asked by staff at the Washington UTC why functionalizing matters. They said, 'we have a way to pay for conservation, so why worry about it?' Another round table member said she had also heard that comment. But there is recognition by the utility commissioners that something needs to happen in terms of the integrated resource plans, and it has been discussed in that context, she said.

For BPA, there is a big issue with capitalization, and the FASB definitions on whether we can capitalize NWS can have a huge impact, Silverstein said.

A round table member pointed out that the move among utilities has been toward expensing energy efficiency. Why not revenue finance NWS? he asked. Another member said the bigger question is how to recover the costs, not whether to capitalize or expense them. Most IOUs have moved to expensing, he agreed. He also pointed out the complexity for IOUs of having some of the costs in transmission rates comes in terms of third-party transmission purchasers, who could, for example, be paying some of the costs of targeted energy efficiency investments. Another member suggested there would be value to the overall system from demand reduction, as well as benefits to constrained areas. Why not recover the costs from all customers? he asked.

We need practical examples, a round table member said. Do you have computer models that can tease out where the transmission benefits are? he asked. Another member asked if NWS would be at a disadvantage if those measures were expensed, while other transmission investments are capitalized. One round table member suggested BPA overlay the value of an NWS in a constrained area on top of the value to the local distribution company. BPA would cover the grid-related expense, he said. The real issue here is can you get demand-side management into transmission rates, not whether it is expensed or capitalized, he stated. BPA can bring the grid value to the program, and local distribution companies can concentrate their resources where it has value to them, a round table member commented.

We've determined it would be okay to charge NWS to transmission rates, but the challenge is in making a defensible case for the value, a BPA attorney said. The discussion in the current rate case would have to be generic, Silverstein commented.

I worry that we will spend more time determining the value than it is worth on an individual project, a round table member said. The number will be very small, she said. I agree, but if you are talking about deferring a distribution substation, that may not be the case, a round table member said. It's very expensive, and if you delay construction, it would be worthwhile, he said.

The publicly owned utilities have a great deal of discretion and flexibility under FASB 71 in how they account for NWS, a round table member said. If we defer a substation for a couple of years with NWS, however, we might find we dampen the load to be served by the substation, with the result that it would generate less revenue once it has to be built, she pointed out.

There was discussion about determining the T&D benefits of energy efficiency measures and the difficulty in doing so. We have a gap between energy efficiency and the distribution benefits it provides, a round table member commented. Demand response and distributed generation are easier to deal with because they are measurable, another member said. We need a pilot with energy efficiency that builds confidence, he said. It's important to know that if we ask a transmission developer to defer a line, we can count on energy efficiency to meet the need, he said.

The contract with Battelle should give us some answers, and they should be able to give us recommendations on pilots, Silverstein responded.

The discussion moved to the question of who benefits, who pays. We need to find out about the incremental cost and T&D benefits of these measures to see if they make sense for utilities, a round table member suggested. And if something is cost-effective, does that assure there will be enough incentive? he asked. To make something non-wires happen, it takes more than dollars, he said.

Will IOUs have problems with regulators if they target a particular area in their service territory for energy efficiency and offer a higher incentive? a round table member asked. That could be a regulatory issue, another member acknowledged. But if we can explain why we are doing it, we may not have a problem, she responded. A huge part of promoting an energy efficiency program is how you market it, a round table member pointed out. There are many ways you can market to a targeted audience, he said.

A round table member suggested BPA focus its outreach on public utilities, letting them know it is investing transmission dollars on energy efficiency in specific areas to benefit the transmission system.

Silverstein summarized several points he picked up from the discussion: we need to do **site-specific** analyses **of the benefits of deferring transmission and distribution (rather than using system average values), along with the NWS potential**; if a measure is cost-effective, recovery will follow – we don't need to worry about functionalizing and capital versus expense; ; identifying T&D benefits from demand

response and distributed generation is less problematic than energy efficiency – we need more work in this area; make it real – fund measures where benefits are found and there are two key areas for BPA outreach – gain general acceptance and show benefits in the transmission rate case.

Expensing NWS investments may be the way to go, he commented. BPA needs to complete its analysis on the Olympic Peninsula, work with the utilities and identify other opportunities and sites, and ask utilities to do site-specific estimates of the value, Silverstein summed up.

Our distribution engineers have a methodology for determining the benefits if we delay construction on the distribution system, a round table member said. With an actual construction project, we try to delay as long as possible, she said. The size of a project determines how much scrutiny it gets in terms of NWS or deferral, another member pointed out. Smaller projects don't get much, larger ones do, he added.

At the end of the day, utilities are in the business of economic development, another round table member observed. There is a bias on the side of utilities working to enable economic development in their communities – you want to bring in jobs, development and growth, she said. There is also the issue of assuring reliability, she added.

Moving to the topic of an outreach strategy, Adams pointed out that BPA is putting out a Non-Wires Solutions newsletter periodically. BPA staff added that they have met with utilities and others on the Olympic Peninsula and that non-wires is part of PIR.

This NWS effort has been going on "under the radar," a round table member said. He asked if BPA has gone out to make presentations to utility industry trade groups, like PNUCC and PPC. To engage the utilities, ask them for something like data or analysis, he suggested. I would suggest you challenge the utilities and tell them you are going to fund some of these measures through the TBL rate case and get their reaction, he said.

I would like to see us target outreach to utilities that have congested areas, another member said. We need a map that shows where those are, she suggested. Another member suggested a conference where distribution planners and energy efficiency staff could get together and discuss issues.

Until you have something specific with projects and dollars, you get a general "yeah, yeah, yeah" reaction, but when you start getting specific, you will get folks' attention, a round table member said. If the non-wires measures do not work on the Olympic Peninsula, a remedial action scheme will be put forward, and it is likely to focus people's attention, she added.

I agree, another round table member said. People support this in concept, but it takes a specific proposal to get their attention, he said. The transmission rate case "is where the rubber will meet the road" – dollars and reliability get people interested, he stated. He

suggested outreach contacts be made with the Western Energy Institute and the NWPPA. Make a presentation to NWPPA's Engineering and Operations conference, he suggested.

We need to prioritize the audiences, another round table member said. The participants in the BPA rate case are a priority audience, another member responded. They will create the financial structure to make this happen, he said.

There was discussion about the extent to which non-wires issues would be addressed in the rate case. Silverstein suggested PIR would be a good place for non-wires related comments. There will be a rate case workshop on pricing issues, he added. Network and point-to-point pricing will be a big issue in the rate case, a round table member said.

Testimonials on the pilot projects would be a good form of outreach, a round table member suggested. You could encourage people who respond to the RFO to incorporate something on letting people know about their results, another said. A round table member suggested articles in the Ruralite and NRDC magazines as part of the outreach. Another member asked what type of outreach was being done with the IOUs and suggested that be undertaken. The Northwest Energy Efficiency Alliance could make a good partner in some of the non-wires efforts, another member suggested.

Whitney said TBL is planning to put out a report on two years of NWS activities by the end of the year. The NWS web site is also a good resource, a round table member said.

Agenda Item 8: September Symposium

Round table members offered a number of ideas for the agenda for the Sept. 28-29 "Energizing the Northwest" symposium. They suggested a tighter focus on non-wires issues and speakers. Focus the energy efficiency panel more tightly on peak, a member suggested. There was a suggestion that demand response and distributed generation be given more emphasis and attention, and that additional speakers be added on those topics. If you are trying to attract utilities, you need to include more speakers from the Northwest, a member suggested. Others suggested increasing the list of sponsors to include NWPPA and PacifiCorp. Whitney said she would follow up on the recommendations and ideas.

Agenda Item 9: Round Table Goals

Round table members identified a number of draft goals for the upcoming year and settled on the following:

- Complete review of 2004 pilot projects.
- Reach out to others as potential partners and for membership on the non-wires round table (potential new members are USDOE, Renewables Northwest, NREL, IOUs).
- Establish and implement outreach activities to communities and customers.

- Identify and conduct new pilots in partnership with utilities (find co-funding opportunities for projects).
- Develop a GIS overlay of renewable resources with areas of transmission congestion.
- Continue work on institutional barriers (pricing, load forecasting. reliability).

Whitney said she would be calling round table members to see if they are interested in continuing their involvement beyond two years and that she would come up with a proposal for continuing the subcommittees.

Foley presented a list of issues and topics related to energy efficiency, distributed generation and demand response that were suggested over the course of the round table meeting and that need continued work. These are items that could go into the work plan for the future, he said.

A round table member suggested adding an item related to recommendations for testing distributed generation and demand response measures periodically. Another member suggested continuing to pursue a pilot on the contribution of energy efficiency to T&D.

We will draft and make available a list of FY 2005-2006 goals, the list of institutional issues we will pursue and a revised symposium agenda, Adams said.

A tentative date of Oct. 27, 2004 was chosen for the next round table meeting.

The meeting adjourned at 12:30 p.m.

###